



Our Home, our Country, and our Brother Man.

ORCHARD GRASS.

It may be a little late in the season to sow grass now, but it is never too late to obtain knowledge which may be of service in the future. With this view we would call the attention of our readers to a grass which we think should receive more cultivation and care in Maine than it has hitherto received. We refer to the Orchard Grass, a cut of which we here give you.



a—Orchard Grass. b—a spikelet magnified.

It will do well on sandy loams if they are good heart, and for orchard lands where the shade is injurious to some other grasses. Perhaps it is better for pastures; at any rate, we once experienced good benefit by mixing it with a variety of other grass seeds which were used in stocking down a small pasture. It gave an early "bite," and a late one, too. We like to use a large variety of seed for stocking down pastures lands. In the case referred to, we used white clover, herdsgrass, red top, blue-meadow, orchard grass, and June grass, or blue grass as it is called in Kentucky. The foul-meadow grew well a year or two and disappeared; the herdsgrass departed after a few years; the others remain.

We copy the following from Mr. Goodale's excellent article on Grasses, in his Agricultural Report for 1859:

"*Dactylis glomerata*—Orchard Grass, Cockfoot. This is one of the most valuable pasture grasses, although as yet cultivated in this State to only a very limited extent. It was at one time extolled beyond its merits as a meadow grass, but when made into hay, being found light and weak compared with timothy, and so failing to fulfil the undue expectations excited, it fell too far below a just estimate. Another objection to its use for hay, is its habit of growth, being a jungle grass, and when mixed with others, standing in tussocks above the general surface, and so renders the sward uneven and not easy for smooth mowing. For meadows, it is best by itself, and seed enough should be sown to have the plants cover the whole surface and make an even sward. Its cultivation, however, as a meadow grass, is still extensive in some of the Middle States, where it is by many preferred to timothy to mix with clover on account of its early ripening, being in the best stage for cutting at the same time as the clover. There seems to be little doubt that it might be more extensively introduced to advantage among us, especially as a useful auxiliary in grazing and mowing. It is an early grass, starting with the first warmth of spring and affording a good bite sooner than almost any other. It is of unusually rapid growth, no one exceeding it in the quickness and vigor with which it shoots forth after being cut off, and it continues to grow until the ground freezes. It affords a good supply of foliage, the leaves being numerous, and if allowed to grow, reaching a height of two feet or more, with comparatively few flowering stems or seed stalks. It bears drouth better than other grasses, remaining green and vigorous when many others are dried up, and its roots being near the surface it is refreshed and invigorated by showers which produce no effect on clover. It is also one of the most permanent of grasses, being very tenacious of life when once fairly established. Orchard grass is less exhausting than timothy, will bear considerable mowing, succeeds well on all tolerably dry, friable soils of medium quality, and is said to be particularly adapted to those of a slaty character.

Judge Buel says of it: "Orchard grass is one of the most abiding grasses we have. \* \* \* It is early and rapid growth and its resistance of drouth render it peculiarly adapted to pasture, but all agree that to obtain its greatest value it should be closely cropped. Sheep will pass over every other grass to feed upon it. \* \* \* In July, I made a movable calf pen thirteen feet square, in which two calves ten and twelve weeks old were confined in a field of orchard grass. The pen was removed twice a day on to fresh feed, and the grass uniformly fed close. The growth was so rapid that the feeding might be repeated on a good bite every fifth day. \* \* \* It is suited to all soils. The seed is easily gathered, but on account of its peculiar lightness (the bushel weighing but twelve to fourteen pounds) this seed should be spread on a floor and sprinkled with water a day or two before it is sown, that it may swell and more readily vegetate. Sow two

bushels on an acre with barley or other spring grain." Some recommend as much as three bushels per acre.

Arthur Young, to whom belongs the credit of having drawn to the culture of grasses in England the attention they deserve, speaks in high commendation of this grass, and took great pains to induce farmers to adopt its cultivation, and particularly as a substitute for rye grass with clover.

Col. Powell of Pennsylvania, a breeder of fine animals, and a gentleman of scientific attainments, travel and nice observation, says, "I have tried orchard grass for ten years. It produces more pasture than any artificial grass I have ever seen in America."

ARTIFICIAL HONEY COMBS.

Some ingenious bee-man in Germany has invented a method of making artificial honey comb, which he puts into hives in which swarms of bees are to be put. This is found to be quite an improvement. The bees find their new quarters already partly filled with unfinished comb, and they soon finish it up and fill it with honey. Thus both time and labor are saved to the bee, and he is made to return honey in less time than if such a start had not been given him.

We learn from a paragraph in the *Ohio Farmer*, communicated to that paper by Prof. Kirkland, that a Mr. J. N. Hoag, in California, has successfully manufactured this species of comb and introduced it to his bees with manifest advantage. It is done by melting down pure beeswax, which is then run into moulds to make it thin and smooth, like window glass. When cooled, it is stamped, or embossed, into the exact shape of the partition which separates the double rows of cells in the comb. "He does not make the entire comb, but merely the groundwork, and it is done in such perfection that when placed in the hive the bees accept of it as their own work and erect their six-sided cells upon it with the utmost alacrity."

For the Maine Farmer. GEOLOGICAL SURVEY.

I wish to make a few inquiries of the Editor of the *Farmer*, relating to the Geological Survey of this State, which was commenced and partly completed by Dr. Charles T. Jackson; and by answering the following queries, you will greatly oblige me, and perhaps other of your readers:

1. What time was the survey commenced, and what amount was appropriated for the purpose of carrying it on?
2. How many annual reports were published, and can they be had now?
3. What was the difference between the survey of this State by Dr. Jackson, and the survey of the *Public Lands* in this State and Massachusetts, by the same gentleman. I think I have seen two separate reports of the above surveys printed by authority of this State.

A SUBSCRIBER.

NOTE. 1. The survey commenced in 1836 and continued through that year and 1837-8. It was then cut off because of the heavy expenses and liabilities which the State incurred on account of the "Aronstook war." In 1836, \$5,000 were appropriated; in 1837, \$3,000; in 1838, \$5,000; in 1839, \$1,000—making in all \$14,000 appropriated for the survey.

2. Three annual reports, and also an additional report respecting the public lands. They are now out of print and cannot be had.

3. No difference. We believe Massachusetts paid something toward the expense of that part of the survey.—Ed.

For the Maine Farmer. BETTER STILL.

MR. EDITOR:—As I see you chronicle the yield of a good cow in Albion at 43 lbs. 10 oz. in a day, (by the way, this mode of weighing milk is far more satisfactory than measuring; as quart, according to my observation, vary not a little in their dimensions, besides being partly filled with froth,) I thought to inquire if this ought to be considered a remarkable yield? If I am not much mistaken, Maine farmers have sadly neglected dairy properties in their cows, and seem too often content with miserably unprofitable animals. There is plenty of room for reform in this respect, and no lack of opportunity, if only attention be paid and proper means be used. I have a snugly built, pure bred Ayrshire cow, (the Ayrshires are recognized the world over as uniformly good milkers, 5 years old, giving 5 lbs. 5 oz. and weighed, the other day, 814 lbs., which dropped her fourth calf six weeks ago, and for the past month has given daily from 40 to 49 lbs. of rich milk. For more than two months she has had one acre of tolerable pasture and no other food. Now pray tell me, as the value of a cow depends not so much on the amount of yield alone, as upon its amount, quality and cost together, what is the actual value of such a cow compared with the average of the milking cows in the State?

Yours, truly, S. L. G.  
Saco, June 28, 1860.

For the Maine Farmer. TURKEYS.

MR. EDITOR:—Will you please to give your opinion as to the best and easiest manner of raising turkeys, and you will oblige

A SUBSCRIBER.

NOTE. We have several times given pretty full directions for raising turkeys. Will some of our readers furnish "A Subscriber" with their experience in the art of raising this very essential of Thanksgiving dinners? We have found a benefit to the health of young turkeys by mixing their meal for dough with water in which *asafoetida* was dissolved. During the present spring, some young turkeys that we had were found to drop and stand balancing themselves awhile and then die. On examining them, nothing was found that would indicate disease—no food was found in their crops or gizzards. We concluded that they first, from some cause, lost their appetites, and finally starved to death. The others so taken, were given a little old-fashioned milk punch, (not enough to get them drunk,) when they soon recovered their appetite and made a live of it. We suppose the stimulus was what roused them into action again.—Ed.

For the Maine Farmer. COVERED DRAINS—ROOT CUTTERS.

MR. EDITOR:—Will you, or some of your subscribers, give us some instruction in making stone underdrains, (we have no tiles,) between this and fall? One piece that I want to drain is a swamp with a clay subsoil, and the rest is gravel. Please give us the distance apart and the depth, so as to make a thorough job.

What is the best kind of hand root-cutter, and the price? M. S.  
Lower Coverdale, N. B., June 11, 1860.

NOTE. There are two modes of making stone drains. One is the making a small passage, or culvert, by laying stone along at the bottom and sides of the ditch about three or four inches apart and as many inches high, or higher if you please; then cover over with stone up to where it will just clear the plow when you wish to plow over it, and then covering over with soil. Flat stones at the bottom will be most convenient in this mode, but they are not absolutely necessary. The other mode, is by making what is called the French drain. This is done by digging a pretty good sized ditch and dumping in round cobbles stones up to the height above named, and then covering over. In this last mode the water finds its way along the descent to its outlet through the little interstices and spaces of the stones.

Such drains require larger ditches than the other kinds, because of the space that the stones require. In either case, before filling in the soil it will be a good plan to put on some spruce, fir, or other evergreen boughs, or shavings, meadow hay, or other material, that shall prevent the earth that you throw on from rattling in too soon and too compact among the stones below. The depth of the ditches must be sufficient to allow you to place the drain below the frosts of winter and the plow in summer. The distance apart must be governed altogether by circumstances. If the land be very wet and the descent small, your drains must be nearer together than if there were only a small quantity of water to get rid of and the descent rapid. This is a matter of judgment altogether, and not of arbitrary rules.

Root-cutters. There are two good kinds of root-cutters in use and to be found at the agricultural warehouses. One of them has been in use several years, and we do not know who the inventor is. The cutting wheel is made of cast iron, faced on one side, through which are inserted knives similar to plane-irons. These cut the vegetable into thin slices, and there are cross knives which cut these slices again into small bits.

The other is Willard's. This has a wheel of iron, or wood, one side of which is covered over with circular rows of steel cutters. These are made of strips of steel in the form of loops, each end of which is secured down to the face of the wheel, while the middle rises up in circular shape forming a sort of gouge; the back end of the loop, or gouge, is made a little larger, so that the piece of vegetable cut will pass through easily. A stopper is placed up against the side to hold the roots while being cut; and the wheel is turned by a crank.

Many people like the last best. They are both good ones. You can get them of Kendall & Whitney, Portland.—Ed.

For the Maine Farmer. THE CURRANT WORM.

MR. EDITOR:—I wish to inquire through your paper if there is anything that will kill the inch or span worm that eats the leaves from the currant and gooseberry bushes? I have had them on my currant bushes for four years, and have given them ashes, lime, black pepper, and a strong solution of alum, but all to no purpose. They will feed on the ashes, lime, and pepper, like an ox in a clover field; but I cannot say how the alum will affect them on their eating the leaves; but it will not destroy them.

A LOVER OF GOOD CURRANTS.

NOTE. June 25th, 1860.

Any one who has been successful in ridding his currant bushes from this pest, we should like to hear from him. In the meantime the following suggestions from the *Rural Register* may be found of some use to our inquiring friend, as well as to others who have suffered from their depredations:

The most usual methods employed to destroy these worms, are, first, hand-picking the bushes; and this is the most effectual, as it is also the most laborious and expensive. It involves the necessity of looking over every leaf, picking off the worms, and afterward destroying them; this operation must be performed as often as any worms show themselves—sometimes every day, and again in two or three days. And this must be followed up until late in summer; a day's neglect, or even a few hours, sometimes, will hazard great loss.

Dusting the leaves with lime is often resorted to, but as it is impossible that it should be scattered on all the leaves, and especially on the under sides, where the worms generally are, it is really of but little use.

It has been suggested to us that a weak solution of turpentine and water, thrown on the bushes with a syringe, might prove efficacious; but we have never heard of a trial having been made with this, and of course cannot give an opinion as to results. If any should try this experiment, it will be necessary to use the turpentine very weak, or it will injure the foliage. The strength necessary to destroy the worms can be tested by using it on a few worms at first, and on one plant, before making a general trial.

On the whole, we can offer little encouragement for saving our useful currants and gooseberries, but still hope that among all the expedients resorted to for the destruction of this pest, that some effectual means will be discovered.

Last year we had a number of currant bushes that were entirely denuded of leaves in June by the caterpillars. We removed them while in this state to another part of the garden, thinking that they might escape the second brood of caterpillars. The bushes all lived and did well, putting out new leaves, and escaped the caterpillars. They are now, however, nearly as much infested as those not removed. We examine the bushes every morning, removing all the caterpillars as

soon as they are hatched; and the leaves are healthy, and we anticipate a good crop of currants. Some of the bushes not transplanted last June were so much affected by the second brood of caterpillars that they have since died. We believe that by transplanting the bushes immediately after the crop is gathered, and then spading the ground where the bushes grew two feet deep, putting the surface containing the caterpillars and their cocoons, at the bottom of the trench, we shall destroy the greater portion; and then by a little attention the next year we can still raise currants and gooseberries.

This insect, though comparatively new here, is a very old enemy in England, where, however, by care and attention, it has been so far destroyed that it now does but little injury. Such will, we hope and believe, be the case in this country.

For the Maine Farmer. WAYSIDE NOTES OF TRAVEL—NO. 29.

PATTON, June 15th.

After a rain which has abundantly watered the earth, the weather is of summer sultriness, and vegetation is putting on its summer appearance. Everything which the farmer has planted or sowed in this vicinity promises an abundant harvest. Grain of every description never looked better; corn, potatoes, and every description of food crop is unusually promising, and grass is as good as any one can wish. There never was a better spring for clearing land and putting in crops, than the past has been, and the farmers have all improved the opportunity. Unless some unforeseen misfortune occurs, more will be raised in this vicinity than ever before.

Patton was No. 4, sixth range, and one of the first places settled above Lincoln. It was settled by enterprising men, and has always been a very prosperous town. Very large quantities of hay and grain have been raised here, and sold to lumbermen at great prices. The land is of a quality equal to any anywhere in Maine, and no more desirable place can be found anywhere for a home than this. There is perhaps no town in Maine in which the people are more generally independent than in Patton. There is scarcely a poor man in town. For the last five years the town has not paid a single dollar for the maintenance of paupers. This exemption from paupers may in part at least be accounted for by the fact that run to any amount has never been held here. There have always been men who have resolutely opposed the traffic and it has been prevented.

The west half of the town is mostly unsettled, and being for sale at one dollar, and one dollar and a half per acre, offers great inducements to those who have the means of buying where they please. The west line of the town is within three miles of the east branch of the Penobscot, up which, as I have already said, in time will be a railroad. When a road shall be made from this town to Naticum, the distance to Bangor will be shortened some ten or fifteen miles, besides avoiding some bad hills.

When the country shall become settled all around this place, Patton, undoubtedly, will be the shire town of a county. There are already, not less than six townships in this vicinity which will soon be incorporated towns, and others will rapidly follow.

CHRYSTAL PLANTATION. This is No. 4, 5th Range, the township east of Patton. It was settled by a few families some eighteen years since, and has some well cultivated farms, good and well finished buildings, and, as I judge, an intelligent and prosperous population. The land, like all in the vicinity, is excellent, and it will make in a few years a desirable town.

In passing through this place, I found numbers of the people "gone to Court." On inquiry, I found that two men had some difficulty, and so they had secured the services of a lawyer, magistrate, and deputy sheriff from Patton, and had at the school-house "trying the case." Like wise men, however, they settled the affair themselves, leaving these ministers of the law without any share of the glory, and the peace of the State of Maine to take care of itself. Courts and lawsuits are sometimes useful appendages to a city, but are very undesirable articles in the wilderness. "A church in the wilderness" will pay much better than litigation.

ISLAND FALLS, next east of Chrystal Plantation, has eighteen families, besides large numbers of young men, who have commenced farms, are building cages, and will, no doubt, soon catch each a bird. It is a fine township, on the Mat-tawamkeag river, on which is a superior mill, which, when undoubtedly will soon be occupied. Since I was here last fall, a bridge over the river, which cost some five hundred dollars, has been completed—two hundred appropriated by the State, and the remainder raised by the inhabitants. A very commodious school-house has also been built by voluntary subscription, in which there is a school of good position of the year. A Sabbath school is also sustained, having a good library, and also public worship on the Sabbath.

Of course, a population so intelligent, moral and religious as this, will never tolerate a grog-shop, or the traffic in intoxicating liquors. I was told that last year, after having been over, the whole people had an excursion down the lake, and there is a beautiful one here, some four miles long, to a place called Norway Island, and there had a picnic, and a glorious time. When they left for their homes, they voted to have an annual festival like it "as long as water ran over Island Falls or surrounds Norway Island." Let me suggest, that when they have their next anniversary, they pass the following vote with a "tremendous ye!"

Resolved, That intoxicating liquors shall never be sold in this town so long as water runs over Island Falls or surrounds Norway Island.

If they will let me know when their next excursion comes off, if within thirty miles, I will certainly "be there to see."

CURE FOR CORNS.

If "A Poor Cripple" will take a lemon, cut off a piece, then nick it so as to let the toe with the corn, the pulp next to the corn—tie this on at night so that it cannot move—he will find next morning that, with a blunt knife, the corn will come away to a great extent. Two or three applications of this will make "A Poor Cripple" happy for life; and I should be glad to hear the result.—London Field.

DETERIORATION OF THE SOIL.

The *Baltimore Rural Register* says: "In this new country, upon which the first European settlements were made but a little more than two centuries ago, we are constantly meeting with old fields, worn into gullies, or covered with sedge, and perfectly valueless in their present condition for agricultural purposes. In England, on the contrary, during the last half century, the crops instead of diminishing in quantity, have been increased in the product to the acre by more than 50 per cent. Yet the land there has been under cultivation more than a thousand years. Now it has been repeatedly demonstrated that by pursuing a similar system, our soils are capable of raising as large an amount of grain or hay to the acre as those of any other country. The remarkable decrease in our agricultural products which statistical tables indicate, can proceed from no other cause than careless and slovenly farming. The fatal defect in the old system of farming with us was, that it did not take into due consideration the injurious influence excited by our climate upon surfaces constantly exposed to an almost tropical heat in the summer season. At an earlier day tobacco was our staple production. It was what wheat has since become—the planter's money crop, and high prices and a steady demand stimulated him to cultivate in a negligent manner as many acres of this plant as the number of his field hands would admit of putting under the plow. A succession of crops taken from the same field, without rest or intermission, speedily wore the life out of it. Fresh lands were cleared, which were subjected to the same ruinous mode of treatment, until in the course of a few years, thousands of acres of as fertile soil as the world could boast became but little better than a sterile waste. Where the fields were not sufficiently exhausted to be thrown entirely out of cultivation, the sun, the wind, the rain, and the frost acting continually upon the exposed surface, completed the work of destruction which reckless tillage had commenced. If there had been instituted, from the beginning, a proper rotation of crops, if the roots of plants had been allowed to succeed fibrous-rooted plants; if the manure of the barn yard, the wood ashes of the house fires, had been husbanded; if shells, or lime, or marl had replaced the alkaline constituents which had been taken from the soil by previous crops; if plaster had been permitted to exert its singular influence upon the growing clover, and if the latter instead of being cut and carted off the land, had been turned under it, those fields now looking so barren and forlorn would have been more fertile at this day than they were when the plow turned the first furrow in the virgin soil."

THE PARSNIP.

The parsnip is one of the most valuable roots that can be grown. In the island of Jersey it is used almost exclusively for fattening both cattle and swine. According to Le Courcier the weight of a good crop varies from thirteen to twenty-seven tons per acre. When parsnips are given to milch cows, with a little hay, in the winter season, the butter is found to be of a fine color and excellent flavor as when the animals are feeding in the best pastures. As parsnips contain six per cent. more mucilage than carrots, the difference may be sufficient to account for the superior fattening as well as butter-making quality of the parsnip. In the fattening of cattle the parsnip is found superior to the carrot, performing the business with more expedition and affording meat of exquisite and highly juicy flavor; the animals eat it with much greediness. The result of experiment has shown that not only in meat cattle, but in the fattening of hogs and poultry, the animals become fat much sooner, and are more healthy than when fed with any other root or vegetable, and that, besides, the meat is more sweet and delicious. The parsnip leaves being more bulky than those of carrots, may be mown off before taking the roots, and given to oxen, cows or horses, by which they will be greedily eaten. Another thing in favor of parsnips for this country is, that the frost does not injure them. They may remain in the ground until spring, when they make splendid feed, at a time every other kind of root or green thing is scarce, or they may be slightly buried, where they can be obtained almost any time during the winter. On account of their rapid growth when young, the weeding is less trouble than weeding carrots.

LONG LIFE AND FARMING.

What advantage hath a farmer in this respect? Not a little, as the results of reliable statistical observations given in a condensed form in what follows, very satisfactorily demonstrate. Dr. Edward Jarvis, of Boston, President of the Statistical Association, has prepared a table from the mortality reports of Massachusetts, for a period of thirteen years, showing the average longevity of men of different occupations. The average length of life of cultivators of the soil is much higher than that of any other class, being 54 years, while that of professional men of all kinds is 48; that of merchants and capitalists, 48; that of mechanics whose business leads them to outdoor activity, 48; that of mechanics confined to shops, 47; that of laborers, 45; that of common carriers, 44. Of the particular professions and occupations the average longevity of clergymen, is 55; of lawyers, 55; of physicians, 54; of coopers, 57; of blacksmiths, 52; of carpenters, 50; of masons, 48; of tanners, 48; of merchants, and clerks, 47; of shoemakers, 45; of painters, 42, and tailors only 41.

This well established fact that farmers have the advantage of almost all other men, and altogether of any other class, in point of longevity, seems worthy of record and of a place in the memory. It may subserve several purposes and be of special service in moments when we get discouraged and disheartened along with a glance at our other blessings and privileges.—Country Gentleman.

TOMATOES FOR MILK COWS.

W. C. Earl of Toledo, Ohio, states that he fed his cow tomatoes, green, ripe, and thawed out after freezing, last fall, with good results; "they not only caused her to give a good supply, but a rich quality of milk." In his opinion, there is no vegetable superior to the tomato for making milk.

IN THE MEADOWS.

By BAYARD TAYLOR.

I lie in the Summer meadows,  
In the meadows all alone,  
With the infinite sky above me  
And the sun on his mid-day throne.  
The smell of the flowering grasses  
Is sweeter than any rose,  
And a million of happy insects  
Sing in the warm repose.  
The mother lark that is brooding,  
Feeds the sun on her wings,  
And the deeps on the noon-day glitter  
With the swarms of fairy things.  
From the billowy green beneath me  
To the fathomless blue above,  
The creatures of God are happy  
In the warmth of their summer love.  
The infinite bliss of Nature,  
I feel in every vein;  
The life and the light of Summer  
Blossom in heart and brain.  
But darker than any shadow,  
Than thunder-clouds unfurled,  
The awful truth arises,  
That Death is in the World.  
And the sky may beam as ever,  
And never a cloud be curled,  
And the air be living odors,  
But Death is in the World!  
Out of the deep of sunshine  
The invisible bolt is hurled;  
There's life in the Summer meadows,  
But Death is in the World!

A NATIONAL PERIL.

A letter from Mr. Mechi, the well-known English agriculturist, to the *London Times*, on the importance of saving the sewerage of towns for agricultural purposes, has called forth from Baron Liebig a letter, printed in the *New York Times*, in which he adds to the arguments of Mr. Mechi some of his own, which are startling in themselves and of very general application. Placing the matter on purely scientific grounds, the distinguished chemist lays down the incontrovertible proposition, which every farmer knows by experience to be true of his own farm, that if crops are taken from land a series of years without restoring to the soil the elements of which it is thus deprived, the land will become impoverished and its yield will begin to diminish. This proposition Liebig proceeds to apply, both to England herself and to the countries upon which she depends for agricultural supplies. Of all that is drawn from the soil and carried into the cities in the shape of corn or meat, little or nothing is returned to the fields; this process of exhaustion is incessant and is counteracted only by the requisite elements for the production of food,—like bones and guano. The moment, therefore, this supply falls off, England must either see a constantly-diminishing return from her soil, arising from no economical law as to the ratio between labor and production but from pure exhaustion, or she must in some way begin to economize the waste of agricultural wealth, now suffered by the loss of the sewerage from her cities, by which a large part of what is drawn from the soil is swept into the sea. Germany, from which England has in great part obtained her supply of bones, is beginning to perceive the value of this material for her own use, and this supply must be regarded as at an end. The supply of guano, it is estimated, will be exhausted in twenty-five years.—Liebig allows fifty years,—and then England will be forced to the point to which Mechi and Liebig wish to bring her in anticipation, of saving her sewerage.

The application of this principle to the countries from which England draws her agricultural imports, was only incidentally necessary for Liebig's purpose, but is equally important. It is obvious that their supplies of corn and meat must fall as rapidly as that of England, possibly more rapidly, since they not only waste but export; and thus the time may be foreseen when with them population will press closely upon production, and when England must look for a diminution of her supplies from abroad, as well as of her own product. Germany already feels the effect of constant exportation, for she is now forced to import manures in order to keep her crops up to their former mark; and what is true of Germany is true elsewhere; "history teaches," says Liebig, "that not one of all of those countries which have produced corn for other lands have remained corn markets, and England has contributed her full share towards rendering unproductive the best lands of the United States, which have supplied her with corn, precisely as old Rome robbed Sardinia, Sicily and the rich lands of the African coast of their fertility." We commonly ascribe the acknowledged impoverishment of our own best grain lands, to wasteful cultivation, and yet what is wasteful cultivation but constant cropping without return? What else wore out the wheat lands of New York, of the West and of Virginia?

The name of Virginia, however, is now so indissolubly associated with impoverishment of soil by long continued exportation, that it at once suggests the necessary extension of the principle affirmed by Liebig to other crops besides food crops—to tobacco, hemp, cotton and wool, to everything which is cultivated and exported without a due return to the soil. Our fields may seem exhausted both in extent and fertility, but says Liebig, and with approval of common sense, a well which receives no supply must finally be emptied by constant pumping, however deep it may be, and there are many sections of the United States which have already bitterly tested the application of this familiar truth.

It is obvious that this great principle of agricultural science, which every thrifty farmer applies in the regular routine of his management, strikes at the very root of the English system of concentrating manufactures, under which so many are content to see the United States becoming in great part a purely agricultural country. In fact this principle is one of the fundamental propositions that antagonistic school of economists, among whom our own countryman, Mr. Carey, is a distinguished leader, and who rest their hopes of the prosperity, civilization and liberty of man upon the encouragement of a diversity of occupations, the establishment of local centres of domestic commerce, and the consumption of agricultural products under such circumstances as shall secure the return of their constituents to the soil. In a question of the sewerage of towns, Liebig gives to this school of economy the strongest support, in a course of reasoning which applies to the United States as well as to England, and which coincides to an interesting degree with that so admirably

enunciated in a portion of President Hill's recent course of Lowell Lectures. The United States as well as Great Britain may lay to heart the warning of the great agricultural chemist, given in the following words:—

"I know that the prophets of future evil have at all times been derided by their own generation, but if history and natural law can furnish any ground whatever for a just conclusion, then there is none which stands upon a firmer basis than this: That if the British people do not take the pains to secure the natural conditions of the permanent fertility of their land, if they allow these conditions as hitherto to be squandered, their fields will at no distant day cease to yield their returns of corn and meat. Every man may picture to himself the state of things which will then gradually arise; but it does not belong to the province of natural science to decide the question whether the night and strength and independence of the nation can be maintained when this state of things have arisen."

TREATMENT OF MARES WITH FOAL.

The usual period of gestation in the mare is from forty-eight to fifty-two weeks, but she sometimes varies from forty-six to fifty-four weeks. Some writers have asserted that the mare goes with foal eleven months and as many days as she is years old; others that she goes eleven months with a mare, and twelve months with a horse colt; but there is no dependence to be placed in such rules. In some instances I have known mares to foal horse colts in ten months and two weeks and in others to go a year and upwards, and yet bring forth mare colts; one year a mare to foal in eleven months, and the succeeding year the same mare to go three weeks longer, and in both cases had fillies. Out of a record of eighty mares kept in one season the average period of gestation was eleven months and one week; of those there were forty horse colts and a like number of fillies; the horse colts averaging one day the longest, which was caused by one very old mare going over a year. These facts prove the fallacy of such predictions.

After your mare has been put to the horse of your choice, she should not be confined too closely during her pregnancy. A run to grass four or five months would be highly advantageous. But if her services are needed either for agricultural or other purposes, she may be kept at moderate work from the time of conception up to the period of foaling, not only without injury but with decided advantage. Moderate exercise is essential to the production of healthy offspring. When half the period of pregnancy has expired, she should be more generously fed, as by this time the fetus will be making greater demands on her for sustenance, and she should therefore be allowed one, two, or three feeds of grain a day, according to her condition and the amount of labor required to perform. This is also the period when abortion is most likely to occur. The mare is in danger of sinking her foal from foal blows, over-exertion, the use of nasty hay or grain, and offensive objects of smell or sight of any kind. Good feeding and careful exercise are the best preventives of this misfortune. The mare should not be let out or exposed to cold winds and storms, and at night she should be placed in a well stall or loose box well littered with clean straw, affording her a good bed, which will add much to her thrift and comfort; she should also be carried and rubbed down, if worked, at least once a day.

When the mare is near foaling she should be by herself, either in a small lot or good roomy stable, under the frequent inspection of her owner or some careful person. The approach of parturition is indicated by the formation of milk in the udder and the filling up of the teats; milk often flowing out a few hours before delivery. She must now be closely watched, as many a foal has been lost by being suffocated in the sheet. If the mare has been well taken care of while with foal, and is in good health, but little danger will attend the act of parturition. When all is right she will be delivered in a very short time; if, however, there appears to be any great difficulty in producing her foal a little gentle assistance is sometimes necessary.

The act of labor over, it is necessary to secure the cord by a ligature near the colt's body—the cord may then be severed by a sharp knife. This practice I have never seen recommended, or heard considered as necessary, but I am fully satisfied of its importance, as in some cases I have found the cord so strong that disastrous consequences would certainly have attended its violent rupture. It will be better to leave the mare alone for an hour or so, that she may be permitted the natural operation of licking her foal undisturbed, and that it may gather strength sufficient to enable it to rise. When once upon its feet, and having learned to suck, there is but little danger but that both mare and colt will do well.—*American Stock Journal*.

HOW TO MANAGE BOX EDGING.

Few people, except professed gardeners, know how this handsome border ornament ought to be planted. It is usually stuck in a few inches deep, and left straggling on top of the ground, with three or four times as much top and three or four times less bottom than it ought to have. Box grows nearly as well from the branches as the roots, and we think makes prettier edging. But the trench in which the edging is to be planted should be full spade deep on the border side, being a few inches shallower on the alley side—the soil should be made fine—and the box inserted to the bottom of the trench, packed in tightly with soil, leaving only from one and a half to two inches out of the ground. There will be no danger of its not growing, or of producing full foliage at the ground. Of course no one would think of planting box without a line.

Trimming box edging is rarely performed either skillfully or judiciously. Instead of cutting off the top squarely, and below the preceding year's growth, let it be pruned to an angle, like the letter A, taking care not to cut below the new growth, and you will through the whole season have a beautifully green, thrifty edging, which your friends will admire, and of which you will be a little proud.

Plowmen. One inch deeper plowing in the whole United States, would produce more increased wealth than all the mines of California.





THURSDAY MORNING, JULY 5, 1890.

## HAYING.

The most important and most laborious harvest in the whole year, is at hand—the grass harvest. The season, thus far, may be called the dry spring; because, although we have had some rains, we have not had the usual quantity, and the early part of the season was uncommonly dry. As a natural consequence, the grass has not grown so abundantly as usual, and we shall, of course, have a much shorter crop than that of last year. It will be necessary to begin the system of a fodder economy in the State. Although it is good economy to cut the grass as soon as it is sufficiently matured for good hay—that is to say, in the full blossoming of it, so as to secure all the gummy and saccharine matter in the stalks and leaves—yet, we hope, that this year, our farmers will wait as long as it will any way do to wait, in order that the grass may obtain as much growth as possible, and thus enable them to cull more for waiting. The adaptation and use of labor-saving machinery, in this business, will enable many of you to wait longer than you otherwise could.

Mowing machines and raking machines should be put into requisition wherever it is possible to do it. Mowing by horse-power, and raking by horse-power, should be practiced when the lay of the land will admit of it. Not only because it can, and therefore should be done more economically than by hand, but because, even if no money were saved, human strength is, and that is a valuable article. We go in for making whatever has no soul, whether it be a brute or machine, do all the hard work that we can.

You will find, by reference to our advertising columns, where you can get good mowing machines and good horse rakes, and the progressive farmer will avail himself of them as fast as his means will allow him.

There are some other machines yet wanting to ease off some of the hard work of haying. We can now, and we can rake pretty comfortably by horse-power. We now want a labor-saving apparatus for loading and unloading the hay. The time is coming when this will be done as successfully as the other branches of this business are done by machinery.

A few brief cautions may not here be amiss: Don't work too hard in the beginning, and thus exhaust yourself before haying is half over. Don't worry yourself into a fever for fear you shall not get your money's worth out of your hired hands, and thereby lose the chance of superintending them yourself. Don't dry your hay to death; and then, again, don't put it into the barn too green—in either case you make a loss. Supply yourself with good hay forks; they are excellent in case of heavy showers. In case of a long dry spell, it will be a good plan to pass around among the haystacks, and putting a rake or pitchfork handle into some part of them, lift them up a little so as to ventilate them. Sometimes, in long cases of being covered, some such operation will prevent the hay from becoming sour or musty.

**THE R. M. MILLS.** The latest newspaper account we have of this vessel, recently wrecked in the Bay of Biscay, is that she "was fallen in with by the American ship Scotia, and for Baltimore, from Rotterdam, and brought into the English Channel by the mate and two seamen. Remained, June 11, in Victoria Dock, London, as when she was brought in. She has lost her bowsprit and foremast. She lies upright, and it is reported makes no water."

We have been shown a private letter containing an extract of a letter from a firm in London to a merchant in New York, which amply justifies the abandonment of the wreck by Captain Sturgis. The letter reads: "The captain and mate of the steamer which took the crew off of the R. M. M. state that at the time they took off the crew it was blowing a gale—the ship was on her beam ends, plank sheer under water, rolling the leading trucks under. It moderated afterwards, and they got on board and found five feet of water in the hold—the foremost gun, and the bowsprit tumbling under the bow. They tried to tow her in, but after hanging on to her seventeen hours, were forced to give it up."

A letter from Capt. Sturgis to one of the owners in this city, adds: "The R. M. M. was boarded by some ship or steamer, righted, pumped, and towed some distance, and again abandoned. Afterwards taken again in tow and brought in." Capt. S. remarks, that the vessel is "dreadfully strained and leaky—wants hoisting and strapping—every seam in her to be recaulked—and to be re-coppered."

**TRANSACTIONS OF NORTH FRANKLIN AGRICULTURAL SOCIETY.** We learn from the Franklin Patriot that a pamphlet of 52 pages has just been issued containing the transactions of the North Franklin Society from its organization up to the commencement of the present year. It contains a list of all the officers, all the premiums awarded, the names of persons, and amount to each; names and residences of all the present members, and the last annual address in full. Since the organization of the Society, the shows and fairs have been held alternately at Phillips and at Strong. The whole amount of the premiums awarded is \$2129.24. Tables are given showing the number of members in the various towns, and a very large amount of information valuable to the members on account of its local interest.

This is an excellent method of preserving from loss and forgetfulness valuable facts and incidents connected with the history of our Agricultural Societies. We hope the example will be followed by others. Will some of our friends connected with the North Franklin Society send us a copy of the "Transactions."

**TOBACCO FOR BEES, AND TOBACCO FOR SEEDS.** Our friend and neighbor, Moses Hanson of W. Thompson, says that his son sowed a crop of pumpkins from the ravages of the striped bug by watering them once or twice, pretty freely, with a strong decoction of tobacco. Our social friend, Capt. J. Jennings of North Wayne, informs us that he feeds tobacco tea to an excellent time to destroy the worms that sometimes get into cabbage roots. Pour it in around the stalks so as to come in contact with them, and they will soon rot. We hope the price of tobacco will not rise on the ground of these facts, but all who are troubled with either one or both of the pests abovementioned, will telegraph them to death.

**WE THANK OUR FRIEND ABORN,** for a contribution to our portridge of some large and delicious strawberries from his garden on Bridge Street. The cultivation of this fruit has of late received increased attention from our city gardeners, some of whom are deriving a profit therefrom.

**THE CITY COUNCIL OF PORTLAND** has extended an invitation to the Prince of Wales to visit the city.

## ARTESIAN WELLS.

A "Subscriber" inquires, if boring for water, or making what is called an "Artesian well," will be successful in every situation. We can briefly answer that it will not be successful every where, even in lands where there is water enough.

These wells were first bored in Artois, (in France), and hence called "Artesian." The principle on which their action is based, is this: There must first be a high point of porous land some where in the region, where water will collect and trickle down beneath a stratum of rock, or marl, or clay, which will not let the water rise up through. This material, whether it be marl, rock, or clay, must also be flat, so as to sheet over the country, keeping the water under it. And here lies the great difference between the position of the rock formations where these kind of wells are successfully made, and ours. The first kind of rocks is flat, and bored through them. Our rock formations are thrown up at different angles to the horizon, and hence the water can come up between the layers, and finding a passage here and there, trickles out, forming springs or streams in almost every place. Of course, it will be of little use to bore through these ledges that have been tilted up at an angle to the horizon. You might bore through them if you liked, and plunge your auger into the moist earth below, or into a river of water below, but, nine times out of ten, this river has one or more natural outlets somewhere else, and it will rise no higher than these outlets. On the contrary, the flat rock country does not afford water, unless the overlying rock be broken by some natural operation, or be artificially broken through. Here Artesian wells are successful. We do not know how many feet deep the deepest of these wells is, but some of them are put down more than a thousand feet below the surface. Those in Paris (France) average 1700 feet in depth. The water reached at this depth is kept below the flat rocks above; but when liberated, will rise 60 feet above the surface—showing that its fountain head is really 60 feet higher than the surface of the city. Some of these flat layers of rock are very thick. In Kentucky, the limestone layer has been found to be 1400 feet in thickness; and geologists assert that, as you travel south, it increases in thickness.

We trust our "Subscriber" will at once see the natural laws upon which such wells are based, and not waste his time and money in boring through rocks where the strata are inclined to the horizon. If no water is to be seen in his immediate neighborhood, he may rely upon it that by following their course he will come to places where the water below them is escaping in the form of springs, or little streams.

**PARODI IS COMING.** Our concert goers will be delighted to learn that Teresa Parodi, one of the first of living singers—who at the time of Jenny Lind's triumphant career in this country, drew with her the admiration and applause of the lovers of classic song all over the land—will visit Augusta. We all remember the gratification derived from the visit of Biscaccianti last summer—that gratification will be enjoyed again in an enhanced degree, because Parodi, as an artist, occupies a higher rank than she, or than any other singer who has ever before visited us. She will be assisted by Mlle R. Montemorenci, an accomplished contralto singer; by Mr. W. H. Bennett, basso, whose singing with the Biscaccianti troupe is pleasantly remembered, and by Mr. E. Hoffmann, a talented and brilliant pianist. One of the great features of the concert will be *La Marsaillaise*, which is pronounced incomparable as sung by Parodi, whose dramatic style is exactly suited to the true rendering of this most magnificent National Hymn.

The concert—one only—will be at the Meonian Hall, on Saturday evening, July 7th.

Extra trains will be run from Waterville, Gardiner and Hallowell, for the accommodation of those who desire to attend the concert.

**EXCURSIONS.** On Wednesday, the steamer State of Maine was chartered for a trip down the river to the "Fort," below Bath. The excursion was of a general character, though especially for Sunday Schools. It was accompanied by the Augusta Band, and some four hundred persons composed the party. We understand that the trip afforded great satisfaction and pleasure to those present.

On Friday, quite a numerous party from the river came down in one of the small steamers, and sailed down for several miles below this city. The Augusta Band was on board, and the music and cheering, as the steamer left the wharf here, indicated that "joy was unconfined" and "all went merry as a marriage bell."

**TALL RYE.** We had brought into our office last Thursday, by Isaac H. Holway of Sidney, some stalks of winter rye growing in a field of one and a half acres, measuring six feet in length, the longest six feet six inches, and one of the heads over eight inches long; and this, Mr. Holway tells us, was the average growth of the entire field. Some six weeks ago, his neighbors' cattle got into the field and before they were discovered had fed the rye close to the ground, leaving it perfectly smooth. The remarkable growth above indicated, had taken place within the last six weeks. Mr. H. is satisfied that the irrigation of his neighbors' cattle into his rye was a benefit to it, although he would have preferred to give his own stock the benefit of the feed.

**MARBLE QUARRY.** Mr. Henry Dudley, who has been recently "prospecting" in this vicinity with a view of discovering minerals and metals of value, has brought to our office a specimen of finely polished verde antique marble, which he had taken from a quarry which he claims to have discovered on the farm of Paul Stevens and Geo. Barton in Sidney. The stone is hard and of fine grain and receives a perfect polish. The quarry has not been opened and it is not known how it will work, but Mr. D. states that it is extensive in quantity and lying by the side of the river. If the layers can be readily split, it will prove of great value. Mr. D. further states that he has discovered in Vassalboro' a species of coal suitable for blacksmithing, specimens of which he exhibited and burned in a forge in this city.

**DEMOCRATIC CONVENTION.** This convention was largely attended on Thursday, and Hon. E. K. Smart was nominated for Governor on the first ballot with great unanimity. A Douglas ratification meeting was held in the afternoon and evening, which was addressed by Messrs. Richardson of Illinois, Samuel of Iowa, and Parsons of Alabama. The outside crowd was entertained by John A. Peters, Esq., of Bangor, and other speakers.

**THE FORTY.** The anniversary of our National Independence is to be duly celebrated in many places in the State—in Portland, Brunswick, Farmington, Wiscasset, Waterville, Fayette, &c. It will not be observed in this city. We are to have nothing more than the usual ringing of bells, firing of guns, crackers, fireworks, &c.

Our paper goes to press somewhat earlier than usual, so that it shall not interfere with the free expression of any body's patriotism, and especially with that of our P. D.

**THE PISCATAQUIS CENTRAL AGRICULTURAL SOCIETY** holds its annual meeting and fair at Dover, October 3d and 4th.

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## TRIP OVER THE GRAND TRUNK—No. 2.

Arrived at Montreal, we are soon conveyed to Donnegana's Hotel, on Notre Dame street, and after breakfast, rally forth to see the "lions" of the old city, with no desire, however, to get sight of the "elephant" also. The greatest of these is the Victoria Bridge, we have already alluded to; but we may add, that a view of this stupendous structure, seen from the shore, as it stretches itself across the broad river, is no less impressive than the passage through it, while a nearer inspection shows the massiveness and solid character of the masonry of its piers and abutments; and the large steamers, with their tall chimneys, passing readily under it, give one at once a realization of its lofty elevation. However viewed, this bridge may be set down as one of the marvels of the age. Nor is the St. Lawrence at this point bounded along by being thus spanned, since along its shore for nearly two miles in extent, are wharves, the solid masonry of which is not surpassed by any like erections on this continent, and which afford unequalled accommodations for the large amount of shipping concentrated at this point—the head of ship-navigation.

The city is supplied with water from the St. Lawrence, which is tapped above the Lachine Rapids and conveyed by viaduct and canal about six miles—a large portion of which is cut through solid rock—into reservoirs at the base of the mountain about 200 feet above the level of the river opposite the city. As the Lachine Rapids are only about 37 feet above the level at Montreal, the water is made to pump itself into the reservoirs, which contain about fifteen millions of gallons. Over three years were occupied in the construction of these works, at a cost of \$1,500,000.

The Lachine Canal is also prominent for its massive masonry and enduring character. This city is noted for its numerous benevolent institutions, among which are the General Hospital, the St. Patrick's Hospital—both elegant buildings; the Protestant Orphan Asylum, the Grey Nunnery, the Hotel Dieu Nunnery, and the Lord Besset's Institution. In one or another of these all descriptions of unfortunate are cared for. The sick, the lame, the maimed, blind and blind—the poor, the widow, orphan, foundling and infirm here find a resting place and home. Some of these institutions are now richly endowed, having many years ago been the recipients of lands which have since become immensely valuable. We visited only the Grey Nunnery, situated on Foundling street, and designed for the care of foundlings and the infirm. It is an exceedingly interesting one, as passing from room to room, we beheld great numbers of children of different ages classified and dressed alike, under the care of the Sisters of Charity, whose life seemed devoted to the care, comfort and instruction of these little ones, all of whom seemed respectful and happy. In another part of the building we saw the aged and infirm, neatly dressed, and assiduously waited upon by these Sisters, who were reading to some, providing medicine for others, assisting some to walk about, and ministering comforts to others who were unable to rise from their beds. An air of quietness and gentleness pervaded the whole establishment, and one could but feel that while "man's inhumanity to man makes countless millions mourn," yet here and there is a redeeming spot—an oasis in this desert of selfishness and cruelty. Attached to this institution are fine grounds, to which the children and patients resort for recreation and invigoration.

On Notre Dame street stands the Court House, which is a large building in the Grecian Ionic style, of cut stone, presenting a fine front of 300 feet, with a height of about 75 feet, and having an open square towards the street tastefully ornamented with trees. Near this, upon the opposite side and at the head of a large square between two streets, stands the Nelson Monument, erected to the hero of Trafalgar, upon the top of which stands his statue, and at its base is an inscription to his memory. This monument is somewhat defaced, but it is still an object of great interest. The Bourse, Market, McGill College, the Exchange, the various Banks, the Mechanics' Institute, and other buildings of like character, are worthy of attention, being mostly of stone, and of superior style of architecture. The churches, however, excite the greatest attraction. Many of the Protestant churches are very elegant structures, and especially Christ Church Cathedral (Episcopal), which is cruciform, and presents a very imposing outline, and architectural effect. Its inside length is 187 feet; width of nave, 78 feet; transept, 99 feet; height of tower and spire, 224 feet. It is built of Montreal stone and partly of Caen stone from Normandy. But the great glory of the city is the Catholic Cathedral, situated in the Place d'Armes, and which is capable of seating 8000 persons. Its towers upon either side are 200 feet high, and its front view is a magnificent specimen of ecclesiastical architecture. It is built of stone of beautiful grain and color, and its whole exterior is grand and imposing. The towers command a splendid view of the island, and in one is a chime of bells, while the other contains one bell weighing 24,000 pounds. Its interior does not strike us as in so good taste. It is highly decorated with gilt, and with paintings which we could not regard as masterpieces, and around its altars is much of tinseled show. Its organ is said to be the largest in America, and cost about \$20,000. Service was going on when we entered, and some fifteen or more priests were present. There were also a hundred, or so, of novices in their black dresses among the worshippers. Not being versed in the rites and ceremonies of the Romish church, we tarried but a short time, and left the inside to gaze once more upon the grandeur of the outside. The other places of interest which we visited in our drive about town, we cannot stop to describe. Bidding adieu to the city of the Royal mountain, we took the comfortable cars on the Grand Trunk Railway and steamed away towards Toronto. In the immediate vicinity of the city, and for miles out, the country does not present a particularly engaging appearance. After passing Cornwall it improves, and a portion of the distance is very beautiful, and reminds the Kennebec traveler of some of the finest portions of his own valley. But what is prominent all the way, is the finished and substantial character of the road. Its iron bridges, its massive masonry, its broad culverts, its fine stone depots, its heavy rails and locomotives, and its nicely graded galled road-way, contrast strongly with those upon some of our own roads. Is this indicative of the differing characteristics of the two nations? Everything is done deliberately—even for cutting the road, it is allowed; and here we may add, that the provision for this is bountiful and excellent, and full justice was done to it by our party. But we must occupy no more space. Certain it is that we found many things in this Railway and in English management which we thought might well be imitated upon this side of the boundary line.

**ARROSTOCK HERALD.** We add one more to our list of exchanges in Arrostock. The Herald, edited by our old friend J. B. Hall, formerly of the Pioneer, has made its appearance. It is published at Presque Isle, in good style and neatly printed. It is Republican in politics.

**FOR THE MAINE FARMER.**  
**LIGHTNING AND ITS DANGERS.**  
Mr. Editor:—The question proposed by your correspondent "R. D. R.," "Do lightning rods afford any protection to buildings," is one of great importance. There is, at this Navy Station a magazine full of powder. Another is in progress of construction, one hundred feet long by fifty feet wide, and to contain five thousand casks of powder. These buildings of stone and brick, if exploded would cause immense destruction. In reading the article of "R. D. R." I was much interested, because if rods do not afford protection to buildings I should not feel safe within two miles of this station.

I do not suppose that any person at all acquainted with electric fluid, regards the rods as an attractor of lightning, but as a means through which the fluid is conveyed from the charged cloud or atmosphere to the earth. All rods properly constructed will do this in proportion to their conducting abilities. From the least, copper the best. The rods on this station are made of copper and applied with the greatest care. If undisturbed, I have never known or heard any injury resulting from lightning. If disconnected they may be worse than useless. But properly connected, with terminations in perpetual moisture I have entire confidence in them. But the residence of the late Nathan D. Rice, of Union, was struck by lightning and provided with rods. "The rods were of iron—the poorest conductor—some three feet below the surface," whether sufficiently deep depends on circumstances of the soil the writer does not inform us. "Glass insulators"—these are placed between the rods and the building to prevent the fluid from passing into the building—glass being a non-conductor.

Now to illustrate my idea; suppose an enclosure, or our public streets without a gutter or culvert, are exposed to the falling rain, as all localities are exposed to an overcharge of electric fluid. The gutter or culvert does not attract the falling rain, but conveys the water when it has collected in any considerable quantity. The gutter should be sufficiently spacious and unobstructed, then no harm will result. The culvert or gutter is to rain what the rod is to the electric fluid,—a means of conveying it to the great reservoir, the earth, and restore its lost equilibrium without injury to its transit.

The "glass insulators" I regard as of no value whatever, and if the rod passes through the insulator as in some rods, the terminations should be exceedingly well made to overcome these non-conducting obstructions. Lightning will not leave a good conducting substance to penetrate a building when the terminations are properly made. Rods of composition or copper (not painted), when applied to a building as described above, I believe will transmit the electric fluid silently to the earth. This method is adopted on all the Naval Stations, and on many other public buildings and residences, and I have yet to learn that it has failed in one single instance. The large Magazine, when completed at this station will be provided with copper rods carefully applied, and I have no doubt will answer the purpose perfectly. Truly yours,

B. F. C.  
Navy Yard, Portsmouth, N. H.

**FOR THE MAINE FARMER.**  
**"DO LIGHTNING RODS AFFORD PROTECTION TO BUILDINGS?"**  
The late effects of a storm on a house in the State of Maine, naturally proposed this question, and it is properly asked by a correspondent of the Maine Farmer. Nothing can be more consistent with Divine perfection than that every dynamic force in nature has its prescribed laws, and nothing more certain than if we can discover those of any particular agent, that we can control it. Now the laws and ways of the electric fluid are well known, and any exception that may occur from any inexplicable disturbing cause, cannot nullify the utility of any preventive that possesses the properties or means which these laws and ways require for its neutralization and discharge.

The every day experiments of the electrician, or of the Professor in his class room, so fully prove the certain and reliable action of the rod, and unnumbered facts so completely test its practical agency, that we may no more doubt the power of this inextinguishable bequest of the immortal Franklin to mankind, than we can of the might of the condenser of Watt to curb the terrible tendencies of steam.

In the case before us, it is said that the rod was well constructed. Admit this; and yet, being jointed, it wanted that continuity that in a perfect rod is a prime element. This is plainly apparent from the discoloration that may be sometimes seen around the joints of a rod—and seldom, if ever, elsewhere. And in case of leaving the rod, the place of departure will be at or near a joint, as was the case in this instance, and probably at the upper joint, from the immense intensity, probably, of a more than ordinarily surcharged atmosphere.

While we would not depreciate the best constructed jointed rods, inasmuch as we believe that dwellings and lives unnumbered have been saved by them, yet as a means of still greater safety do we unhesitatingly recommend the "combination rod," lately offered to the public by the Cleveland Lightning Rod Company. Besides the great point of perfect continuity, its surface, through its combination of copper and iron, is much greater than even the largest iron rod that by electricians is acknowledged to be sufficient for ample protection. In addition to this, another power, from its combination, is claimed for it, and that is its circuit. Consisting of two metals, copper and iron,—the former being a better conductor than the other,—a cloud may be sooner neutralized than by one metallic surface, in the same way that we more quickly draw the charge from a Leyden jar by a twisted wire of these two metals, than by one. This may be a new idea to some, but it is worthy of consideration as a fact that derives proof from an examination of the lightning on a tree, where the rent will be often found to run down one side than the entire surface. Possessing all that is valuable in the jointed rod of best construction, and the improvements named, this most beneficial invention has received the approval of all who, with an understanding of the subject, have examined it, and orders are daily received not only for private but for public edifies. It is manufactured in lengths of from 5 to 600 feet—and also a galvanic arrangement to prevent the oxidation of the metal in the earth (an important matter). It certainly presents all that science can require, and must continue to claim, wherever it may be offered, the same consideration it has received thus far, and for the better protection of life and property meet with the same demand.

N. E. SMITH.  
Washington, D. C., June 28, 1860.

## FOR THE MAINE FARMER.

**LIGHTNING AND ITS DANGERS.**  
Mr. Editor:—The question proposed by your correspondent "R. D. R.," "Do lightning rods afford any protection to buildings," is one of great importance. There is, at this Navy Station a magazine full of powder. Another is in progress of construction, one hundred feet long by fifty feet wide, and to contain five thousand casks of powder. These buildings of stone and brick, if exploded would cause immense destruction. In reading the article of "R. D. R." I was much interested, because if rods do not afford protection to buildings I should not feel safe within two miles of this station.

I do not suppose that any person at all acquainted with electric fluid, regards the rods as an attractor of lightning, but as a means through which the fluid is conveyed from the charged cloud or atmosphere to the earth. All rods properly constructed will do this in proportion to their conducting abilities. From the least, copper the best. The rods on this station are made of copper and applied with the greatest care. If undisturbed, I have never known or heard any injury resulting from lightning. If disconnected they may be worse than useless. But properly connected, with terminations in perpetual moisture I have entire confidence in them. But the residence of the late Nathan D. Rice, of Union, was struck by lightning and provided with rods. "The rods were of iron—the poorest conductor—some three feet below the surface," whether sufficiently deep depends on circumstances of the soil the writer does not inform us. "Glass insulators"—these are placed between the rods and the building to prevent the fluid from passing into the building—glass being a non-conductor.

Now to illustrate my idea; suppose an enclosure, or our public streets without a gutter or culvert, are exposed to the falling rain, as all localities are exposed to an overcharge of electric fluid. The gutter or culvert does not attract the falling rain, but conveys the water when it has collected in any considerable quantity. The gutter should be sufficiently spacious and unobstructed, then no harm will result. The culvert or gutter is to rain what the rod is to the electric fluid,—a means of conveying it to the great reservoir, the earth, and restore its lost equilibrium without injury to its transit.

The "glass insulators" I regard as of no value whatever, and if the rod passes through the insulator as in some rods, the terminations should be exceedingly well made to overcome these non-conducting obstructions. Lightning will not leave a good conducting substance to penetrate a building when the terminations are properly made. Rods of composition or copper (not painted), when applied to a building as described above, I believe will transmit the electric fluid silently to the earth. This method is adopted on all the Naval Stations, and on many other public buildings and residences, and I have yet to learn that it has failed in one single instance. The large Magazine, when completed at this station will be provided with copper rods carefully applied, and I have no doubt will answer the purpose perfectly. Truly yours,

B. F. C.  
Navy Yard, Portsmouth, N. H.

**FOR THE MAINE FARMER.**  
**"DO LIGHTNING RODS AFFORD PROTECTION TO BUILDINGS?"**  
The late effects of a storm on a house in the State of Maine, naturally proposed this question, and it is properly asked by a correspondent of the Maine Farmer. Nothing can be more consistent with Divine perfection than that every dynamic force in nature has its prescribed laws, and nothing more certain than if we can discover those of any particular agent, that we can control it. Now the laws and ways of the electric fluid are well known, and any exception that may occur from any inexplicable disturbing cause, cannot nullify the utility of any preventive that possesses the properties or means which these laws and ways require for its neutralization and discharge.

The every day experiments of the electrician, or of the Professor in his class room, so fully prove the certain and reliable action of the rod, and unnumbered facts so completely test its practical agency, that we may no more doubt the power of this inextinguishable bequest of the immortal Franklin to mankind, than we can of the might of the condenser of Watt to curb the terrible tendencies of steam.

In the case before us, it is said that the rod was well constructed. Admit this; and yet, being jointed, it wanted that continuity that in a perfect rod is a prime element. This is plainly apparent from the discoloration that may be sometimes seen around the joints of a rod—and seldom, if ever, elsewhere. And in case of leaving the rod, the place of departure will be at or near a joint, as was the case in this instance, and probably at the upper joint, from the immense intensity, probably, of a more than ordinarily surcharged atmosphere.

While we would not depreciate the best constructed jointed rods, inasmuch as we believe that dwellings and lives unnumbered have been saved by them, yet as a means of still greater safety do we unhesitatingly recommend the "combination rod," lately offered to the public by the Cleveland Lightning Rod Company. Besides the great point of perfect continuity, its surface, through its combination of copper and iron, is much greater than even the largest iron rod that by electricians is acknowledged to be sufficient for ample protection. In addition to this, another power, from its combination, is claimed for it, and that is its circuit. Consisting of two metals, copper and iron,—the former being a better conductor than the other,—a cloud may be sooner neutralized than by one metallic surface, in the same way that we more quickly draw the charge from a Leyden jar by a twisted wire of these two metals, than by one. This may be a new idea to some, but it is worthy of consideration as a fact that derives proof from an examination of the lightning on a tree, where the rent will be often found to run down one side than the entire surface. Possessing all that is valuable in the jointed rod of best construction, and the improvements named, this most beneficial invention has received the approval of all who, with an understanding of the subject, have examined it, and orders are daily received not only for private but for public edifies. It is manufactured in lengths of from 5 to 600 feet—and also a galvanic arrangement to prevent the oxidation of the metal in the earth (an important matter). It certainly presents all that science can require, and must continue to claim, wherever it may be offered, the same consideration it has received thus far, and for the better protection of life and property meet with the same demand.

N. E. SMITH.  
Washington, D. C., June 28, 1860.

**CORPUS ERODITUM PENS.** This is the name of a new pen which we are now using, sent us for trial by Messrs. Bailey & Noyes, Portland, who are agents for the manufacturer. They are warranted not to corrode in any ink, and for a red ink Rolling Pen are equal to a gold pen. It is an excellent pen for any purpose.

**THE FOURTH IN LINE.** The day will be celebrated by a parade of a company of Fantastics and dreworks in the evening.

**THE GREAT EASTERN.** The great event to which this nation has so long looked forward has at last transpired. The Leviathan steamer has reached our shores, not, as was at first anticipated upon the coast of Maine, and bound for the harbor of Portland, but she has crossed the bar at New York, and is safely moored in North River. Her promised voyage has been performed and hundreds of thousands of people have greeted her presence in the Empire city.

She left Southampton on the 17th and reached her port on the 25th, bringing forty-two passengers only, among whom are several of the Directors of the Company and George Wilkes, Esq., of the Spirit of the Times.

The following number of miles was run per day: June 17th, 285 miles; 18th, 290 do.; 19th, 20th, 275 do.; 21st, 304 do.; 22d, 280 do.; 23d, 302 do.; 24th, 299 do.; 25th, 325 do.; 26th, 333 do.; 27th, 250 do. and the Bay.

Her appearance was greeted by the firing of cannon, displaying of flags from all ships in the harbor, cheering, &c. The account as given in the telegraphic reports is as follows:

"The Great Eastern passed the battery at 4 30 this afternoon. She crossed the bar with a pilot boat. An immense fleet composed of crafts of all descriptions, crowded with passengers, attended her to the battery, and all the piers on the North river were crowded with spectators, the mammoth vessel being greeted by them with cheers as she passed. Salutes were fired from different quarters and vessels. She was decked with flags and moved very slowly, only one of the hundreds of steamers being able to keep alongside of her. The steam frigate Niagara, which is lying in the stream, looks small by comparison.

The Great Eastern is moored at the foot of Hammond and Troy streets, North River. She extends two entire blocks. Immense crowds are flocking to see her. On her way up she was saluted by all the forts, steamships and other vessels, which were returned from her. Staten Island, Long Island and all available points are crowded with people. It is estimated that nearly a million of people witnessed her arrival.

The passengers by the Great Eastern state that the voyage has been particularly fine, fully demonstrating the fine sea-going qualities of the vessel and the excellence and reliability of her machinery. Her highest speed was fourteen and a half knots per hour, but her bottom being covered with barnacles is estimated to have made a difference against her of two knots an hour."

Thus has been accomplished that in relation to which many of our witnesses have shaken their heads, and many others have doubted while they hoped. It is an event in which both this country and Great Britain have a deep interest, as it may yet work a great change in our commercial relations. The practicability of building and sailing these monster vessels has now been demonstrated, and it only remains to prove that they can be managed and run with profit (in relation to which we entertain strong doubts) in order to constitute them the great carriers of the world. At all events, she bears with her to our shores a testimonial of honor to the great name of Fulton, such as he could never have conceived that his invention would have brought him, and of which his countrymen may well feel proud.

**SUPREME JUDICIAL COURT.** The S. J. Court here is holding the Law Term for the middle district in this city during the two weeks last past, and are still in session. The cases coming up from the counties of Lincoln, Somerset, and Sagadahoc were argued and submitted during these two weeks. On Saturday P. M. the cases of Kennebec were reached, and the case of The Augusta Bank vs. The City of Augusta was opened, and the argument was in progress when our paper went to press. This is the suit upon city coupons which was reported from the Nisi Prius term held in November last. Messrs. J. H. Williams of Augusta, and P. Barnes of Portland, are counsel for the Plaintiff, and Messrs. J. H. Williams of Augusta, and H. W. Paine of Boston, appear for Dits. (In our next we hope to give the leading points of the argument on both sides.) The Judges present at this term are C. J. Tenney and associate Justices Rice, Cutting, May, Goodenow and Davis.

**VISIT OF THE PRINCE OF WALES.** The eldest son of Queen Victoria and the heir apparent to the English throne, is expected to arrive on a visit to the British Provinces about the middle of July. He will probably land at Halifax, and the people there are preparing to receive him in grand style. The streets will be cleaned, decorated and illuminated by the city corporation, while the citizens will give by subscription a banquet to the Prince, in the Province Building, on one of the evenings of his visit, which is expected to extend over several days. The Governors of the neighboring provinces and those of the maritime New England States will be invited to participate at the dinner which the Lieutenant-Governor will give to the Prince. A regatta, military review, fire-works, illuminations, processions and addresses are all included in the Halifax programme of arrangements.

It is also expected that the Prince will make the tour of the United States. He will be received with a princely and honorable welcome wherever he may go.

**THE HOMESTEAD BILL.** At the heel of the session of Congress a bill was passed opening to settlers all lands subject to private entry, and the old numbered sections only of all the government lands which have not yet been exposed to public sale. It protects the present pre-emption right in Minnesota, Kansas, Nebraska, Iowa, Wisconsin, and the like, against land sales for two years, and allows them to purchase the land at half price, namely, 62½ cents per acre.

The bill extended the rights to occupy and pre-empt only to heads of families and not to single men. Having passed both branches, it received the veto of the President, upon the ground that Congress had over-stepped its constitutional power, and had no right to give away to individuals the public domain and that the bill unjust and unequal discriminations. The bill therefore failed to become a law.

**SPECIAL SESSION OF THE SENATE.** The Senate reassembled on Tuesday, the 25th inst. by proclamation of the President for the consideration of unfinished Executive business. The Senate was in session three days, during which the extradition treaty with Switzerland, and treaties of commerce with Bolivia, Venezuela, Honduras and Nicaragua were ratified. The treaty with Spain, was defeated on account of a clause providing for the payment of the Amieted negroes. The vote stood 24 to 18—not two thirds. The consideration of the Mexican treaty was postponed to December next. Two Indian treaties were ratified and several appointments of the President confirmed, viz: Wm. F. Russell as Navy Agent of New York; Isaac H. Wright as Superintendent of Springfield Armory; Judge Kinney as Chief Justice of Utah.

**THE SAN ANTONIO HERALD** announces the death at that place of the Hon. M. P. Norton, Judge of the Fourteenth Judicial District of Texas. Judge Norton studied law in this city in the office of the late H. W. Fuller, and was for several years in practice in Somerset county, and at one time Land Agent of Maine. He removed to Texas several years since and has occupied a high position in that State.

**FIRE.** The shop owned and occupied by E. A. Jordan, at Lincolnville, as a carriage manufactory was destroyed by fire, with its contents, on the night of the 23d inst. Loss about \$1,000 insured \$350.

## GENERAL CONFERENCE OF MAINE.







